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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/773,449

01/31/2001

Alan S. Geller

MSFT116244

8030

26389

7590

07/06/2007

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EXAMINER

CARLSON, JEFFREY D

ART UNIT

PAPER NUMBER

3622

MAIL DATE

DELIVERY MODE

07/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/773,449	Applicant(s) GELLER ET AL.	
	Examiner Jeffrey D. Carlson	Art Unit 3622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-8,11,12,17-20,22,25-27,30-35,38-42,44-46 and 48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,11,12,17-20,22,25-27,30-35,38-42,44-46 and 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the paper(s) filed 4/2/07.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3, 8, 11, 12, 25-27, 32-35, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merriman et al (US5948061).**

Regarding claims 1-3, 8, 11, 12, 25-27, 32-35, 40 Merriman et al teaches selecting online advertisements to serve to users when a user/client browser requests an ad (ad opportunity). Ad campaigns are stored in the system and define target audiences, number of desired impressions and start/stop dates when the ads are to be run. The system chooses a particular ad to be served from among a plurality of qualifying ads. Merriman et al teaches a satisfaction index (SI) as [6:27-59]:

$$SI = \frac{n}{N} * \frac{\text{end} - \text{start}}{\text{now} - \text{start}}$$

Where:

n: -the number of times the particular advertisement has been viewed by anyone

N: the number of times the advertisement is to be seen by anyone

end-start: the total number of days that the advertisement is scheduled to run

now-start: the number of days that the advertisement has run to date

Although Merriman et al does not state that his (actual views) * (campaign duration) / (elapsed time) = (estimated total campaign views), however, this is the case. If 5 views were had for day 1 of a 3 day campaign, n * (end-start)/(now-start) would equal 5*(3)/(1) which equals 15. This represents a linear projection of expected total views given the views to date as:

$5 * 3 / 1 = 15$ views. This 15 represents the sum of the 5 already encountered and the (linearly expected) 10 future impressions for days 2 and 3 of the 3 day campaign given the daily rate experienced. This would be the same ratio as that claimed, if it were not inverted. Merriman however provides the same ratio components, but evaluates them as estimated total estimate / goal. However, it would have been obvious to one of ordinary skill at the time of the invention to have evaluated the relationship desired by Merriman et al's components (the same ones as applicant) as goal/(total estimate) – in other words, it would have been obvious to one of ordinary skill at the time of the invention to have flipped Merriman's SI and proceeded with ad selection. Either way, a

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ratio measurement can be made regarding whether ads are running ahead of schedule or behind schedule. Clearly in this case an ad running ahead of schedule would be evaluated as < 1 rather than the > 1 as written by Merriman et al. Merriman et al's SI is used to assign priorities to (qualifying) ads and the ads are selected accordingly. The SI is taken to be dynamic because the SI represents estimated total opportunities which is defined in part by the "n" term and because Merriman et al updates the server when views are made (n) – thus dynamically affecting the SI. Like applicant, the system provides a dynamic rotation of ads that tends to slow down ads that are being served to quickly. The steps of Merriman et al are carried out by programming executed by a computer server. The functionality which stored the ad campaign data is taken to provide an ad manager. The functionality which schedules the ads is taken to provide the ad engine.

4. Claims 6, 7, 17-20, 22, 30, 31, 38, 39, 41-42, 44-46, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merriman et al in view of Alberts (US5937392).

Regarding claims 6, 7, 17-20, 22, 30, 31, 38, 39, 41-42, 44-46, 48, Merriman et al does not provide details about how the system is initialized and at what initial rate the ads are served when the campaign first starts (with views = 0, SI = 0). Merriman et al does not teach the use of estimated impressions for *starting* an ad campaign scheduling frequency. Alberts also teaches a computer controlled ad campaign where the server chooses a particular ad frequency. Alberts teaches a system that can predictively

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model the number of hits (ad opportunities) in various time regions. For example, the system can be used to predict that weekend page views are slower than during working hours of M-F 8a-5p. Alberts uses recurring patterns, historical statistics and current statistics to provide control of ad distribution/impressions [6:43-45, 66-67]. It would have been obvious to one of ordinary skill at the time of the invention to have used such historically-based predictions to initiate the system of Merriman et al so that the initial ad frequencies are given a balanced start (not too fast or too slow). Both Merriman et al and Alberts use current statistics to further dynamically change the distribution schedule. Merriman et al teaches the use of estimated ad opportunities left. Merriman et al essentially treats the system as a linear/regular activity (1 time period), whereby the views seen in time period 1 (day 1) are used to predict the remaining time periods, and assuming that activity between those time periods will remain the same. Alberts teaches that the ad campaign can be broken up into time periods (which add up to the total campaign duration), so that the granularity can capture and measure activity that changes over time periods. Each time period can then be treated with dynamic frequency scheduling so that an advertiser can control the intensity of advertising in various, smaller, time periods [6:44-56]. It would have been obvious to one of ordinary skill at the time of the invention to have treated the scheduling of Merriman et al in such a manner so as to provide more control over specific time periods. As stated above, it would have been obvious to one of ordinary skill at the time of the invention to have initially populated/relied upon estimates for scheduling and then used actual statistics to

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dynamically change the scheduling based on current statistics. The non-linear time periods taught by Alberts represent applicant's array elements.

Response to Arguments

5. Applicant argues that that Merriman et al does not teach estimating opportunities. Examiner disagrees and points out above where $(\text{actual views}) * (\text{campaign duration}) / (\text{elapsed time}) = (\text{estimated total campaign views})$. Said another way, Merriman's SI formula represents estimated total campaign views $[n * (\text{end-start})/(\text{now-start})]$ which is divided by total desired views [N]. Therefore, the SI represents a rotation frequency defined in terms of a quotient between an impression goal (N) and the total number of opportunities where the total number of opportunities is based upon views seen so far (n) and a representation of remaining duration $(\text{end-start})/(\text{now-start})$. As stated above, inverting the ratio relied upon by Merriman et al is believed to have been an obvious modification.
6. Applicant argues that Merriman et al does not provide dynamic adjustment as a function of the number of actual display opportunities. The SI is taken to be dynamic because the SI represents estimated total opportunities which is defined in part by the "n" term and because Merriman et al updates the server when views are made (n) – thus dynamically affecting the SI. Like applicant, the system provides a dynamic rotation of ads that tends to slow down ads that are being served to quickly.
7. Applicant argues that Alberts fails to teach populating the array elements, however the teachings of Alberts are taken to provide one of ordinary skill with

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motivation to break up the campaign duration or Merriman et al into time segments (i.e. array elements) and treat the predicted page views differently from each other, rather than using Merriman et al's more simple linear approach (where each time period is assumed to have equal page views).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Langheinrich et al (US6654725) teaches systems for management of advertising campaign impression. It teaches of display probabilities and using finely shredded time periods to adjust more accurately for time periods with different probabilities/expectations. [col 8 lines 29-43].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Carlson whose telephone number is 571-272-6716. The examiner can normally be reached on Mon-Fri 8a-5:30p, (work from home on Thursdays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571)272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey D. Carlson
Primary Examiner
Art Unit 3622

jdc